

<b>Interview Summary</b>	Application No.	Applicant(s)	
	09/553,143	SWAN ET AL.	
	Examiner	Art Unit	
	Trang U. Tran	2614	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Trang U. Tran. (3)\_\_\_\_\_.
- (2) Timothy J. Bechen. (4)\_\_\_\_\_.

Date of Interview: 05 May 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 24-26.

Identification of prior art discussed: None.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The proposed amendment attached hereto appears to overcome the 35 U.S.C 112, 1<sup>st</sup> paragraph problem.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
**TRANBTRAN**  
**PATENT EXAMINER**

  
**MICHAEL H. LEE**  
**PRIMARY EXAMINER**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

##### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

**PROPOSED CLAIM AMENDMENTS TO  
FACILITATE EXAMINER INTERVIEW**

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Swan et al.  
Serial No.: 09/553,143  
Filing Date: April 20, 2000  
Confirmation No.: 4441

Examiner: T.U. Tran  
Art Unit: 2614  
Our File No.: 00100.00.0230  
Docket No.: 0100.0000230

Title: **METHOD FOR DEINTERLACING INTERLACED VIDEO BY A GRAPHICS  
PROCESSOR**

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Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*Certificate of First Class Mailing*  
*I hereby certify that this paper is being deposited with the United*  
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*VA 22313-1450, on this date.*

\_\_\_\_\_  
Date Karenina Oliver

**PROPOSED**

Dear Sir:

In response to the final Office Action mailed March 11, 2004, Applicants submit the following amendment and response.

**Amendments to the Specification** begin on page \_\_\_\_ of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begin on page \_\_\_\_\_ of this paper.

**Amendments to the Drawings** begin on page \_\_\_\_\_ of this paper and include both attached replacement sheets and \_\_\_\_\_ (\_\_\_\_\_) annotated sheets showing changes in red.

**Remarks** begin on page \_\_\_\_\_ of this paper.

An **Appendix** including amended drawing figures is attached following page \_\_\_\_\_ of this paper.

Amendment dated \_\_\_\_\_  
Appl. No. 09/553,143  
Atty. Docket No. 0100.0000230

**In the Specification:**

Please replace paragraph no. \_\_\_\_\_ on page \_\_\_\_\_, with the following rewritten paragraph:

**In the claims:**

Please cancel claims \_\_\_\_\_ without prejudice.

Please amend claim \_\_\_\_\_ and add claim \_\_\_\_\_ to read as follows:

Claim 1 (canceled)

Claim 2 (previously presented): The method of claim 24 including the step of storing the at least portion of the adaptively de-interlaced frame image for display.

Claim 3 (original): The method of claim 2 including the step of retrieving, by a graphics processor display engine, the stored adaptively de-interlaced frame image for display on at least one display device.

Claim 4 (previously presented): The method of claim 24 wherein the step of performing adaptive de-interlacing by the 2-D/3-D engine includes executing 2D/3D instructions that result in performing median filtering.

Claim 5 (previously presented): The method of claim 24 wherein the step of performing adaptive de-interlacing by the 2-D/3-D engine includes executing 2D/3D instructions that result in performing spatio-temporal filtering.

Claim 6 (previously presented): The method of claim 24 including the step of controlling the 2D/3D engine to perform the adaptive de-interlacing prior to display by a display engine.

Claim 7 (previously presented): The method of claim 24 including the step of issuing 2D/3D instructions to the 2D/3D engine to carry out de-interlacing of lines of video data from interlaced fields.

Claim 8 (previously presented): The method of claim 24 wherein the at least one instruction includes at least of a: line inverting instruction, a scaling instruction and a blend instruction.

Claim 9 (previously presented): The method of claim 24 including the step of determining whether the at least one instruction is for the 2D/3D engine or for a display engine.

Claim 10 (canceled)

Claim 11 (previously presented): The method of claim 25 including the step of storing the at least portion of the adaptively de-interlaced frame image for display.

Claim 12 (previously presented): The method of claim 25 wherein the step of performing adaptive de-interlacing by the 2-D/3-D engine includes determining non-motion between a plurality of pixels based on spatial-temporal filtering.

Claim 13 (previously presented): The method of claim 25 including the step of controlling the 2D/3D engine to perform the adaptive de-interlacing prior to display by a display engine.

Claim 14 (original): The method of claim 13 including the step of issuing 2D/3D instructions to the 2D/3D engine to carry out de-interlacing of lines of video data from interlaced fields

Claim 15 (previously presented): The method of claim 25 wherein the at least one instruction includes at least of a: line inverting instruction, a scaling instruction and a blend instruction.

Claim 16 (canceled)

Claim 17 (previously presented): The storage medium of claim 26 including instructions that causes the one or more 2D/3D engines to store the at least portion of the adaptively de-interlaced frame image for display.

Claim 18 (previously presented): The storage medium of claim 26 including instructions that causes one or more graphics processor display engines to retrieve the stored adaptively de-interlaced frame image for display on at least one display device.

Claim 19 (previously presented): The storage medium of claim 26 including instructions that causes the one or more 2D/3D engines to executing 2D/3D instructions that result in performing median filtering.

Claim 20 (previously presented): The storage medium of claim 26 including instructions that causes one or more processing devices to control the 2D/3D engine to perform the adaptive de-interlacing prior to display by a display engine.

Claim 21 (previously presented): The storage medium of claim 26 including instructions that causes one or more processing devices to issue 2D/3D instructions to the 2D/3D engine to carry out de-interlacing of lines of video data from interlaced fields on a pixel by pixel basis.

Claim 22 (previously presented): The storage medium of claim 26 wherein the at least one instruction includes at least of a: line inverting instruction, a scaling instruction and a blend instruction.

Claim 23 (previously presented): The storage medium of claim 26 including instructions that causes one or more graphics processors to determine whether the at least one instruction is for the 2D/3D engine or for a display engine.

Claim 24 (previously presented): A method for de-interlacing interlaced video using a graphic processor comprising the steps of:

receiving at least one instruction for a 2-D/3-D engine to facilitate creation of an adaptively de-interlaced frame image from at least a first interlaced field; and

performing, by the 2-D/3-D engine, at least a portion of adaptive de-interlacing based solely on [[at least]] the first interlaced field in response to the at least one instruction to

produce at least a portion of the adaptively de-interlaced frame image, ~~wherein the at least a portion of adaptive de-interlacing is not based on a second interlaced field;~~

wherein the first interlaced field is alternating lines of the interlaced video.

Claim 25 (previously presented): A method for de-interlacing interlaced video using a graphic processor comprising the steps of:

determining whether at least one received instruction is for a 2D/3D engine or for a display engine;

receiving the at least one instruction for the 2-D/3-D engine to facilitate creation of an adaptively de-interlaced frame image from at least a first interlaced field;

performing, by the 2-D/3-D engine, at least a portion of adaptive de-interlacing based solely on ~~[[at least]]~~ the first interlaced field in response to the at least one instruction to produce at least a portion of the adaptively de-interlaced frame image, ~~wherein the at least a portion of adaptive de-interlacing is not based on a second interlaced field;~~ and

retrieving, by a graphics processor display engine, the stored adaptively de-interlaced frame image, generated by the 2D/3D engine, for display on at least one display device;

wherein the first interlaced field is alternating lines of the interlaced video.

Claim 26 (previously presented): A storage medium containing executable instructions that when executed by one or more 2d/3d engines, causes the one or more 2D/3D engines to:

receive at least one instruction to facilitate creation of an adaptively de-interlaced frame image from at least a first interlaced field; and

perform at least a portion of adaptive de-interlacing based solely on ~~[[at least]]~~ the first interlaced field in response to the at least one instruction to produce at least a portion of the adaptively de-interlaced frame image, ~~wherein the at least a portion of adaptive de-interlacing is not based on a second interlaced field;~~

wherein the first interlaced field is alternating lines of the interlaced video.



Amendment dated \_\_\_\_\_  
Appl. No. 09/553,143  
Atty. Docket No. 0100.0000230

### REMARKS

This response is for the purpose of facilitating an Examiner Interview. The claim amendments are proposed claim amendments and are not meant for official submission to the PTO.

Respectfully submitted,

Date: \_\_\_\_\_

By: \_\_\_\_\_

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